

**PRACTICE TEST 4 - CHAPTERS 6, 7, 10**Beginning and Intermediate Algebra by Messersmith, 4<sup>th</sup> edition**Categorize the expression as a monomial, a binomial, or a trinomial.**

1.  $19x^3 - 20x$

**Find the degree of the polynomial.**

2.  $12x^2 - 11x^4 + 10x$

**Evaluate the expression for the given values.**

3.  $3v^2 - 4v + 2$  when  $v = -2$

**Add like terms.**

4.  $-2c^2 - 5c - 12c^2 - c - 2c$

**Add the polynomials.**

5.  $(-10x^5 + 9x^4 - 3x^3 + 2x + 11) + (-6 - 3x - 3x^2 + 3x^3 + 3x^5)$

6.  $(7x^3y^2 + 14xy + 14) + (5xy - 2x^3y^2 - 7)$

**Subtract the polynomials.**

7.  $(-18x^2 + 13x) - (-3x^2 + 4x)$

**Multiply and simplify.**

8.  $(10y^4)(-6y^4)$

9.  $9t^3(5t^4 - 10t^2 + 2)$

10.  $5u^3v^5(3u^2v - 3uv^2 - 6u + 10)$

11.  $(y - 11)(y + 3)$

12.  $(6v + 7)(6v - 5)$

13.  $(5b - 6)(5b + 6)$

14.  $(p + 9)^2$

**Divide and simplify.**

15. 
$$\frac{63a^8 - 21a^6 + 56a^3}{7a^2}$$

16.  $(4n^7 + 10n^5 - 10n^4 - 10n^3) \div (-2n^3)$

17.  $(27s^7 + 2s^6 - 9s^3) \div (3s^4)$

$$18. \quad \frac{p^2 + 10p + 16}{p + 8}$$

$$19. \quad \frac{10p^2 - 7p - 12}{5p + 4}$$

$$20. \quad (s^2 - 3s - 28) \div (s + 6)$$

$$21. \quad \frac{6s^2 + 8s - 29}{3s - 5}$$

**Find the greatest common factor of the group of terms.**

$$22. \quad 10b^3, 14b^2$$

$$23. \quad b^4a^5, b^4a^4, \text{ and } b^5$$

$$24. \quad p^2(k - 2) \text{ and } q^2(k - 2)$$

**Factor out the greatest common factor.**

$$25. \quad 3m^7 + 33m^6 - 24m^5 + 3m^4$$

**Factor out the common binomial factor.**

$$26. \quad y(x - 8) + 4(x - 8)$$

**Factor by grouping.**

$$27. \quad 4uv^2 - 32uv + 8v^2 - 64v$$

$$28. \quad 5pq + 40p - 6q - 48$$

**Find the square root, if possible.**

$$29. \quad \sqrt{\frac{169}{36}}$$

$$30. \quad \sqrt{6^2 + 8^2}$$

$$31. \quad \sqrt{10^2 - 8^2}$$

**MATH 0361 PRACTICE TEST 4 ANSWERS**

1. binomial	18. $p + 2$
2. 4	19. $2p - 3$
3. 22	20. $s - 9 + \frac{26}{s+6}$
4. $-14c^2 - 8c$	21. $2s + 6 + \frac{1}{3s-5}$
5. $-7x^5 + 9x^4 - 3x^2 - x + 5$	22. $2b^2$
6. $5x^3y^2 + 19xy + 7$	23. $b^4$
7. $-15x^2 + 9x$	24. $k - 2$
8. $-60y^8$	25. $3m^4(m^3 + 11m^2 - 8m + 1)$
9. $45t^7 - 90t^5 + 18t^3$	26. $(x - 8)(y + 4)$
10. $15u^5v^6 - 15u^4v^7 - 30u^4v^5 + 50u^3v^5$	27. $4v(u + 2)(v - 8)$
11. $y^2 - 8y - 33$	28. $(q + 8)(5p - 6)$
12. $36v^2 + 12v - 35$	29. $\frac{13}{6}$
13. $25b^2 - 36$	30. 10
14. $p^2 + 18p + 81$	31. 6
15. $9a^6 - 3a^4 + 8a$	
16. $-2n^4 - 5n^2 + 5n + 5$	
17. $9s^3 + \frac{2s^2}{3} - \frac{3}{s}$	